

# Male Infertility Research

**Quantitative evaluation of spermatozoa ultrastructure after acupuncture treatment for idiopathic male infertility.**

**Effect of Acupuncture on Sperm Parameters of Males Suffering from Subfertility Related to Low Sperm Quality.**

**A prospective randomized placebo-controlled study of the effect of acupuncture in infertile patients with severe oligoasthenozoospermia.**

**Does acupuncture treatment affect sperm density in males with very low sperm count? A pilot study.**

**Success of acupuncture treatment in patients with initially low sperm output is associated with a decrease in scrotal skin temperature.**

**Quantitative evaluation of spermatozoa ultrastructure after acupuncture treatment for idiopathic male infertility.**

**Objective:** To study the abnormal sperm features of idiopathic infertile men after acupuncture therapy.

**Result(s):** Statistical evaluation of the TEM data showed a statistically significant increase after acupuncture in the percentage and number of sperm without abnormal defects in the total ejaculates. A statistically significant improvement was detected in acrosome position and shape, nuclear shape, axonemal pattern and shape, and accessory fibers of sperm organelles. However, specific sperm pathologies in the form of apoptosis, immaturity, and necrosis showed no statistically significant changes between the control and treatment groups before and after treatment.

**Conclusion(s):** Acupuncture can effectively treat idiopathic male infertility. A general improvement of sperm quality, specifically in the abnormal integrity of spermatozoa, was seen after acupuncture, although we did not identify specific sperm pathologies that could be particularly sensitive to this therapy.

J. Pei, E. Strehler, U. Noss, M. Abt, P. Piomboni, B. Baccetti, K. Sterzik. Quantitative evaluation of spermatozoa ultrastructure after acupuncture treatment for idiopathic male infertility., Fertility and Sterility, July, 2005; Volume 84, Issue 1, pp: 141-147.

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### **Effect of Acupuncture on Sperm Parameters of Males Suffering from Subfertility Related to Low Sperm Quality.**

**Objective:** The purpose of this study was to evaluate the effect of acupuncture on the sperm quality of males suffering from infertility related to sperm impairment. Semen samples of 16 acupuncture-treated infertile patients were analyzed before and 1 month after treatment (twice a week for 5 weeks). In parallel, semen samples of 16 control untreated infertile males were examined. Two specimens were taken from the control group at an interval of 2-8 months. The expanded semen analysis included routine and ultramorphological observations.

**Results:** The fertility index increased significantly ( $p = .05$ ) following improvement in total functional sperm fraction, percentage of viability, total motile spermatozoa per ejaculate, and integrity of the axonema ( $p = .05$ ), which occurred upon treatment. The intactness of axonema and sperm motility were highly correlated ( $\text{corr.} = .50, p = .05$ ).

**Conclusion:** Patients exhibiting a low fertility potential due to reduced sperm activity may benefit from acupuncture treatment.

Sherman, S, F Eltes, V Wolfman, N Zabludovsky and B Bartoov. [Effect of Acupuncture on Sperm Parameters of Males Suffering from Subfertility Related to Low Sperm Quality](#), Systems Biology in Reproductive Medicine, Volume 39, Issue 2, September 1997, pp 155 – 161.

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### **A prospective randomized placebo-controlled study of the effect of acupuncture in infertile patients with severe oligoasthenozoospermia.**

**Objective:** To evaluate the ultramorphologic sperm features of idiopathic infertile men after acupuncture therapy.

**Result(s):** Statistical evaluation of the TEM data showed a statistically significant

increase after acupuncture in the percentage and number of sperm without ultrastructural defects in the total ejaculates. A statistically significant improvement was detected in acrosome position and shape, nuclear shape, axonemal pattern and shape, and accessory fibers of sperm organelles.

However, specific sperm pathologies in the form of apoptosis, immaturity, and necrosis showed no statistically significant changes between the control and treatment groups before and after treatment.

**Conclusion(s):** Acupuncture treatment can improve idiopathic male infertility. A general improvement of sperm quality, specifically in the ultrastructural integrity of spermatozoa, was observed after treatment of acupuncture, although specific sperm pathologies that could be particularly sensitive to this therapy were not specified.

Stefan Dieterle, Chunfang Li, Robert Greb, Felix Bartzsch, Wolfgang Hatzmann, Dongmei Huang. [A prospective randomized placebo-controlled study of the effect of acupuncture in infertile patients with severe oligoasthenozoospermia.](#), Fertility and Sterility, Volume 92, Issue 4, October 2009, pp. 1340-1343.

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### **Does acupuncture treatment affect sperm density in males with very low sperm count? A pilot study.**

**Objective:** Western medical therapies for the treatment of poor sperm density are usually not effective. The purpose of this study was to evaluate the effect of acupuncture on these males.

**Results:** There were no changes in any of the parameters examined in the control group. There was a marked but not significant improvement in the sperm counts of severely OTA males following acupuncture treatment (average =  $0.7 \pm 1.1 \times 10^6$  spermatozoa per ejaculate before treatment vs.  $4.3 \pm 3.2 \times 10^6$  spermatozoa per ejaculate after treatment). A definite increase in sperm count was detected in the ejaculates of 10 (67%) of the 15 azoospermic patients. Seven of these males exhibited post-treatment spermatozoa that were detected even by LM. The sperm production of

these seven males increased significantly, from 0 to an average of  $1.5 \pm 2.4 \times 10^6$  spermatozoa per ejaculate ( $Z = -2.8$ ,  $P < \text{or} = 0.01$ ). Males with genital tract inflammation exhibited the most remarkable improvement in sperm density (on average from  $0.3 \pm 0.6 \times 10^6$  spermatozoa per ejaculate to  $3.3 \pm 3.2 \times 10^6$  spermatozoa per ejaculate;  $Z = -2.4$ ,  $P < \text{or} = 0.02$ ). Two pregnancies were achieved by the IVF-ICSI procedure.

**Conclusion:** The study found that acupuncture may be an effective, non-invasive treatment for males with very poor sperm density, especially those with a history of genital tract inflammation.

S. Siterman, F. Eltes, V. Wolfson, H. Lederman and B. Bartoov. [Does acupuncture treatment affect sperm density in males with very low sperm count? A pilot study.](#), *Andrologia*, Volume 32, January, 2000, pp. 31–39.

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**Success of acupuncture treatment in patients with initially low sperm output is associated with a decrease in scrotal skin temperature.**

**Objective:** Poor spermatogenesis in patients with inflammation of the genital tract is associated with scrotal hyperthermia. These patients can benefit from acupuncture treatment. A study was designed to confirm whether the effects of acupuncture treatment on sperm output in patients with low sperm density was associated with a decrease in scrotal temperature.

**Results:** The five patients with initially normal scrotal temperatures were not affected by the acupuncture treatment. Following treatment, 17 of the 34 patients with hyperthermia, all of whom had genital tract inflammation, had normal scrotal skin temperature; in 15 of these 17 patients, sperm count was increased. In the remaining 17 men with scrotal hyperthermia, neither scrotal skin temperature nor sperm concentration was affected by the treatment. About 90% of the latter patients suffered from high gonadotropins or mixed etiological factors.

**Conclusion:** Acupuncture treatment is recommended for men experiencing low sperm

count due to inflammation of the genital tract associated with scrotal hyperthermia. Shimon Siterman, Fina Eltes, Liora Schechter, Yair Maimon, Hanny Lederman, Benjamin Bartoov. [Success of acupuncture treatment in patients with initially low sperm output is associated with a decrease in scrotal skin temperature.](#) Asian Journal of Andrology, Volume 11, Published online January 5, 2009, pp. 200–208.

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